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whole human race is from a single couple, and that such is the legitimate construction of the biblical passages mentioning Adam and Eve, did not appear to him to be a question in Natural History; that is, he conceives it to be impossible, from any natural evidence now existing upon the surface of the earth, either to prove or disprove this proposition, or to render it more probable or improbable, and that it must, therefore, rest for its certainty upon revelation, records, and the grammatical construction and just verbal meaning of an ancient language.

November 23d.

The President, Mr. ORD, in the Chair.

A letter was read from the Secretary of the Acad. C. L. C. Naturæ Curiosorum, dated Breslau, 28th Aug. 1852, presenting the volume of its Transactions acknowledged this evening.

Dr. Leidy prevented a paper from M. Tuomey, entitled "Description of some fossil shells from the Tertiary of the Southern States," which, being intended for publication, was referred to a committee, consisting of Dr. Leidy, Mr. Conrad, and Mr. Charles E. Smith.

Dr. Woodhouse presented a paper for publication, describing a new species of *Numenius*; which was referred to Mr. Cassin, Dr. Wilson and Dr. Heermann.

Dr. Owen presented for inspection by the members, a copy of his Report of the Geological Survey of Iowa, Wisconsin and Minnesota, and called attention to some of the illustrations, which were produced by an entirely new method; the copy of the fossil being *medal-ruled* on the steel plate from the object itself.

November 30th.

Mr. ORD, President, in the Chair.

The Committee on Mr. Tuomey's paper, offered at last meeting, reported in favor of publication in the Proceedings.

Description of some Fossil Shells from the Tertiary of the Southern States.

By M. TUOMEY, Prof. of Geology, Univ. of Alabama.

The fossils described in this paper are from a well known locality at Wilmington, N. C. The bed in which they were found is a coarse calcareous conglomerate resembling, in mineral composition, the compact white limestone of the Santee.

Sir Charles Lyell described this structure in the first volume of the Quarterly Journal of the Geological Society of London, and referred it to the Eocene. In a report on the geology of South Carolina I pointed out the existence of one or two cretaceous forms—*Ammonites placenta*, Morton, and a *Trigonia* related to *T. thoracica*, Morton, in the same bed, together with Eocene fossils.

Some of the fossils described are much larger than any occurring in the Eocene, yet as a group, no one acquainted with our cretaceous and Eocene fossils could hesitate in referring them to the latter. Besides, Sir Charles Lyell has given a list, from this locality, of several species found elsewhere in the Eocene.

As the deposit is a conglomerate and in the vicinity of cretaceous beds, it would occur to any one that the presence of a few cretaceous forms could be easily explained by supposing the breaking up of a cretaceous bed, and the transportation of its debris and included fossils into the eocene sea, where they were entombed with the molluscan remains of that period. Nevertheless it is evident that the cretaceous shells were filled at the same time, and with the same mineral matter as those of the eocene found with them, for the casts of both are composed of compact white limestone. Now, excepting the stratum on Timber Creek, New Jersey, none of our cretaceous deposits could furnish the mineral matter of either the casts of these shells or the rock in which they are enclosed. Between the Delaware and Chattahoochee the cretaceous rocks are made up of loose, grey, loamy and silicious strata, without white cretaceous beds; and in Alabama, the rotten limestone, which is the prevailing rock, is entirely different from the Wilmington bed; even the cretaceous deposit in the vicinity, from which it might be supposed these remains were derived, is composed of the usual dark-colored silicious stratum of green sand. It would be equally difficult to account for the presence of these fossils, by supposing that they remained empty and were subsequently drifted into the eocene sea, and there filled with sedimentary matter and buried with the forms of that period. At all events, after a careful examination of the locality, as well as the fossils, I could satisfy myself only by supposing the inhabitants of these shells to have lived and died during the eocene period, to have been contemporaneous with the forms with the remains of which they are buried.

The fossils to be described are for the most part in the form of casts; frequently, however, casts of both the interior and exterior of the shells occur, and they are generally so characteristic that there can be but little danger of mistake, if even hereafter the shells themselves should be found.

1. *TROCHUS NIXUS*: large; axis very oblique; whorls 5 or 6, flat or slightly concave, marked by revolving lines obsoletely cancellated; suture of the cast deep, of the shell basely impressed; umbilicus open, deep.

Dimen. Spiral angle 74° ; ht. 4; br. 5 in.

2. *PYRULA AMPLA*: ventricose, ovate; spire depressed; whorls 4, last one very large.

Dimen. Spiral angle 100° ; ht. 6 in; br. 4.5 in.

This fossil is also found in the white limestone of the Santee.

3. *FUSUS ABRUPTUS*: ovoid; whorls rounded, ventricose, the last one terminating abruptly in the canal.

Dimen. Spiral angle 70° ; ht. 6 in.; br. 4 in.

4. *CONUS MUTILATUS*: spire depressed; whorls flattened; side longitudinally convex.

Dimen. Spiral angle 101° ; ht. 2.5 in; br. 1.5 in.

Casts of shell are abundant at Wilmington, N. C., and in the white limestone of Alabama. It is also found in the eocene beds on the Santee. They are easily distinguished from the other eocene species. In *C. gyratus*, Morton, the spire is more produced; whilst in *C. sauridens*, Con., it is more depressed. Casts of the latter have the spiral whorls in nearly the same plane.

5. *VOLUTA CONOIDES*: conical; spire short; whorls 4, columellar plaits numerous. Resembles *Conus gyratus*.

Dimen. Spiral angle 87° ; ht. 2 in.; br. 1 in.

6. *TRIGONIA DIVARICATA*: cast of left valve, ribs 15, somewhat acute, converging towards the posterior margin, arched on the umbones, divaricating below. After the sixth rib there is a half rib intercalated.

Dimen. Length 2 in; br. 1.5 in.; ht. 1 in.

7. *T. LUNATA*: ribs 14, rounded, slightly ventricose: posterior margin crenulated.

Dimen. Length 1.75 in.; br. 1.25 in.; ht. 1.25 in.

This and the preceding are distinguished from *T. thoracica*, Morton, by their greater length compared with their breadth, as well as by the more round ribs.

8. *CARDITA TRAPEZIUM*: shell rhomboidal, cordate ventricose, ribs acute, crossed by coarse incremental lines.

Dimen. Length 2.25 in.; br. 2 in.; ht. 2 in.

This shell differs from *C. alticosta*, Con. in outline, as well as in being more ventricose, and having less prominent ribs.

9. *CUCULLEA LÆVIS*: shell smooth or marked by increment lines, ribs none; umbones ventricose; beaks nearly central; hinge area wide; plate of anterior muscular impression extending from the beaks to the margin, wide.

Dimen. Length 4.25 in.; br. 3.5 in.

This fossil can be distinguished from *C. vulgaris*, which it resembles, by the smooth exterior, and deep and long muscular impression.

10. *ARCA CANCELLATA*: shell thin, very inequilateral, cancellated by radiating lines and approximating transverse lines; umbones prominent; beaks close; hinge-line slightly curved; posterior margin rounded, compressed; anterior margin much contracted.

Dimen. Length 2.5 in.; br. 3.5 in.

The Committee on the following paper by Dr. Woodhouse, reported in favor of publication in the Proceedings.

Description of a new species of Numineus (Moehr.)

By S. W. WOODHOUSE, M. D.

NUMINEUS OCCIDENTALIS.

Form. In general form and color, this bird is much like *N. longirostris*, Wilson. The color, however, is much lighter and more rufous, the bill short and very slender, the primaries are more pointed; their inner web is not so broad. Wings extend about half an inch beyond the tail. Toes short and slender.

				Inches.
<i>Dimensions.</i>	Total length of skin	-	-	16 3-10ths.
	Length of bill along the ridge	-	-	4 2-10ths.
	Wing from flexure	-	-	11 5-10ths.
	Length of tarsus	-	-	2 8-10ths.
	“ middle toe	-	-	1 34-10ths.
	“ naked space of tibia	-	-	1 6-10ths.

Color. Feathers of the top of the head have a broad central line of blackish brown, terminating on either side by whitish brown; neck light reddish brown, the shaft of each feather being black and terminating by a broad blackish-brown spot. Those of the hind part of the neck have the central line of black much broader. Chin white. Back black with irregular markings of reddish brown, forming spots; these, as they approach the rump, become more reddish, and are broader, having much the appearance of bands. Upper tail coverts reddish brown; shafts black, with transverse black bands. The tail is slightly rounded, and consists of twelve feathers of a reddish brown color, with ten transverse black bands. Under coverts reddish brown. Belly and thighs light reddish brown. Sides reddish brown, with irregular blackish brown zigzag lines. The shaft of the first primary is white; the outer webs of the first three are black; of the fourth slightly mottled with reddish brown; on their inner webs reddish, mixed with irregular lines of brown; the remainder of the primaries are reddish brown, with zigzag transverse bars of black. The secondaries and tertials are more black, the bands being confluent in the middle. Under plumage, long

axillaries, inner wing coverts, bright reddish brown. Bill blackish brown. Legs and feet flesh color. A pale supraciliary line extends from the base of the bill.

Habitat. Rio Grande, New Mexico.

Obs. This remarkable species is closely allied to the *N. longirostris* and *N. Hudsonicus*, but from both of them it differs very materially. I procured it near Albuquerque, on the Rio Grande, whilst attached to the Expedition, as Surgeon and Naturalist, under the command of Captain L. Sitgreaves, Topographical engineer U. S. army, exploring the Zuni and the Great and Little Colorado rivers of the west. There were but few of them there at the time. They were on the sandbars of the river, feeding upon worms and insects.

ELECTIONS.

Dr. James M. Corse, of Philadelphia, was elected a *Member*; and Dr. H. W. Kennedy, of Buenos Ayres, and Mr. James Broome Smith, of California, were elected *Correspondents* of the Academy.

December 7th.

Vice President BRIDGES in the Chair.

Letters were read

From Mr. Dexter Marsh,, dated Greenfield, Mass., Dec. 3d, 1852, acknowledging the receipt of his notice of election, as a *Correspondent*.

From the Librarian of the Advocates' Library, Edinburgh, dated 1st, Nov., 1852, acknowledging the receipt of a copy of Dr. Ruschenberger's Notice of the Academy.

From the President of the "Naturwissenschaftlichen Verien in Halle" dated 18th Oct. 1852, presenting the volumes of its Proceedings announced this evening, and asking an exchange of publications.

Dr. Heermann presented a paper intended for publication in the Journal, entitled "Notes on the Birds of California, collected during a three years residence in that country;" which was referred to Mr. Cassin, Dr. Woodhouse and Dr. Wilson.

Dr. Charles M. Wetherill read a paper, intended for publication in the Proceedings, entitled "Analyses of the Cotton Plant and Seed, with suggestions as to manures, by the late Thomas J. Sumner, of South Carolina; communicated by Chas. M. Wetherill;" which was referred to Dr. Genth, Dr. Le Conte and Mr. Vaux.

Dr. Hallowell presented a paper, intended for publication in the Proceedings, entitled "On a new genus, and two new species of Reptiles inhabiting North America;" referred to Dr. Le Conte, Dr. Woodhouse and Dr. Leidy.

Dr. Woodhouse presented a paper for publication in the Proceedings describing two new species of pouched Rats of the genera *Geomys*, Raf. and *Perognathus*, Wied, which was referred to a Committee consisting of Dr. Ruschenberger, Dr. Le Conte and Dr. Leidy.